

## Scale-Up: Defined STEM

**Overview:** Defined STEM is a web based content resource that provides teachers real world based Performance and Literacy tasks built around a central career theme.

### Program Summary

Defined STEM is a K-12, subscription-based web service available to all students, educators and parents throughout Iowa and can be used in multiple learning environments. Defined STEM is designed to support STEM education and follows four core principles:

- Relevance
- Rigor
- Application
- Understanding

Defined STEM contains video resources designed to motivate students by contextualizing STEM skills in an array of professional career applications.

Performance Tasks are built from the Understanding By Design framework and present a real-world problem within the context of a career/industry. Students are instructed to complete 1+ culminating activities based on the task's "Goal".

Defined STEM's literacy tasks are designed for alignment with the Common Core English Language Arts Standards to promote high-quality student assignments that develop reading, writing, and thinking skills in a cross-curricular fashion.

Finally, by aligning all Defined STEM tasks to the state, Common Core, and Next-Gen Science Standards, Defined Learning's project-based learning platform provides an environment for differentiating learning for a wide range of student abilities.

### Project Description/Objectives

- Integrate STEM education across all subject areas for all k-12 students.
- Bring career relevance into the classroom through real world videos depicting how various jobs use STEM.
- Infuse project based learning and authentic assessment into the curriculum.
- Solve real world problems with the use of cross curricular learning with a focus on 21st century skills.
- Infuse real world STEM career based non-fiction reading writing into the curriculum.

### Grade Levels: K-12

### What is Provided by the Project

Defined STEM is a web based resource that is available to users 24 hours a day 7 days a week. Each subscribing user will also receive the following:

- Customer and technical support between the hours of 9 to 5 Monday through Friday.
- Access to the unfacilitated on-line professional development course for Defined STEM.

Unlimited number of facilitated professional development webinars hosted by Defined STEM implantation staff. Covering the following topics:

- |                                    |                              |                                   |
|------------------------------------|------------------------------|-----------------------------------|
| • Standards-based instruction      | • Differentiated Instruction | • Understanding by Design         |
| • 21st Century teaching & learning | • Webb's Depth of Knowledge  | • Analytical Rubrics              |
| • Rigor/Relevance Framework        | • New Bloom's Taxonomy       | • Integration of technology tools |
| • Multiple Intelligences           | • Performance assessment     | • Authentic assessment            |

### What is Required by the School or Local Education Agency (LEA) in Order to Implement This Program:

Defined STEM is a web based resource that can be accessed from any computer, tablet or phone that is connected to the Internet. A school/educational organization will have to have the ability to access [www.definedstem.com](http://www.definedstem.com) by a Internet connected device.

Defined STEM will not be reimbursing any participant to attend a professional development session. Any participant that attends a professional development session will be responsible for all travel related cost and any other costs related to attending the training.

**Website to View Program and Standards Alignment:** <http://definedstem.com/standardgrid.cfm> (user name is iastem and password iastem)

**Program Video:** <http://definedstem.com/home/learn-more.cfm>